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FOREST STATISTICS FOR HARNEY COUNTY, OREGON

U. S. Forest Service. Pacific Northwest Forest Experiment Station

CALIFORNIA FOREST & RANGE EXPERIMENT STATION
330 GIANNINI HALL, UNIVERSITY OF CALIFORNIA
BERKELEY, CALIFORNIA

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
PACIFIC NORTHWEST FOREST EXPERIMENT STATION



ADDRESS REPLY TO
DIRECTOR
AND REFER TO

424 U. S. COURT HOUSE
MAIN AND SIXTH STREETS
PORTLAND, OREGON

May 8, 1936.

R - NW
Forest Survey

California Forest & Range Exp. Station,
Federal Bldg.
Asheville, N.C.

99.54
F762P
no 48

Dear Sir:

Enclosed is a copy of "Forest Statistics for Harney County, Oregon". This is the sixth of the Forest Survey reports for counties in eastern Oregon and eastern Washington and is similar to those already sent you. The explanatory text which accompanied the first report should be referred to in connection with this and other reports for counties in eastern Oregon and eastern Washington.

Forest statistics published to date include those for all counties in western Oregon and western Washington, Klamath, Wasco and Jefferson Counties in eastern Oregon, and Yakima and Klickitat Counties in eastern Washington. Additional copies of these reports will be furnished upon request.

Very truly yours,

THORNTON T. MUNGER, Director

By

H. J. Andrews
Acting

Enclosure

CALIFORNIA FOREST & RANGE EXPERIMENT STATION
330 GIANNINI HALL, UNIVERSITY OF CALIFORNIA
BERKELEY, CALIFORNIA

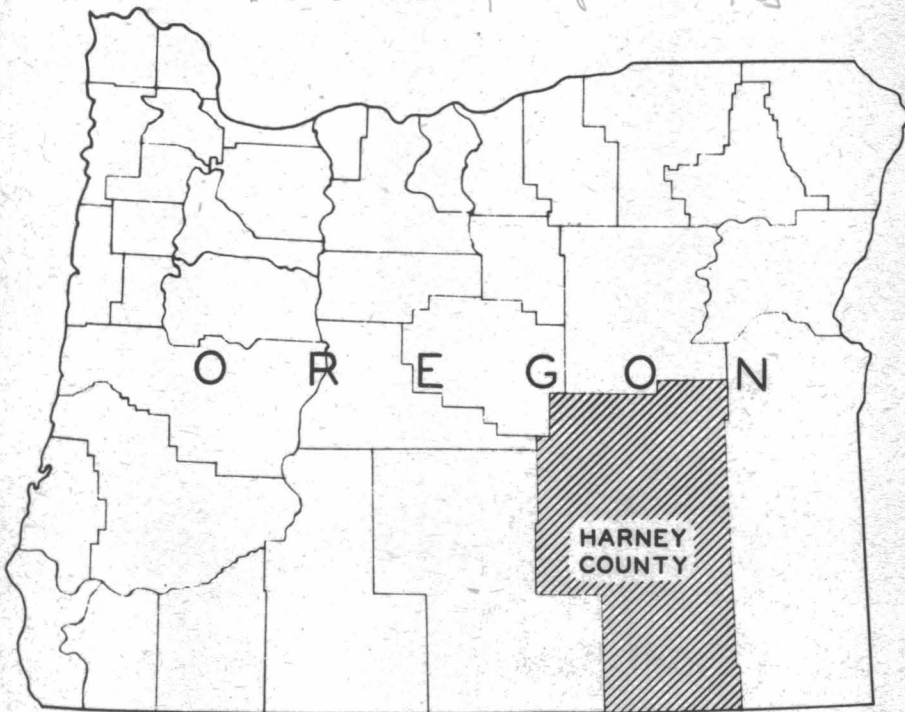
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FOREST STATISTICS FOR HARNEY COUNTY, OREGON

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FROM THE INVENTORY PHASE OF THE FOREST SURVEY

Forest survey report no. 48



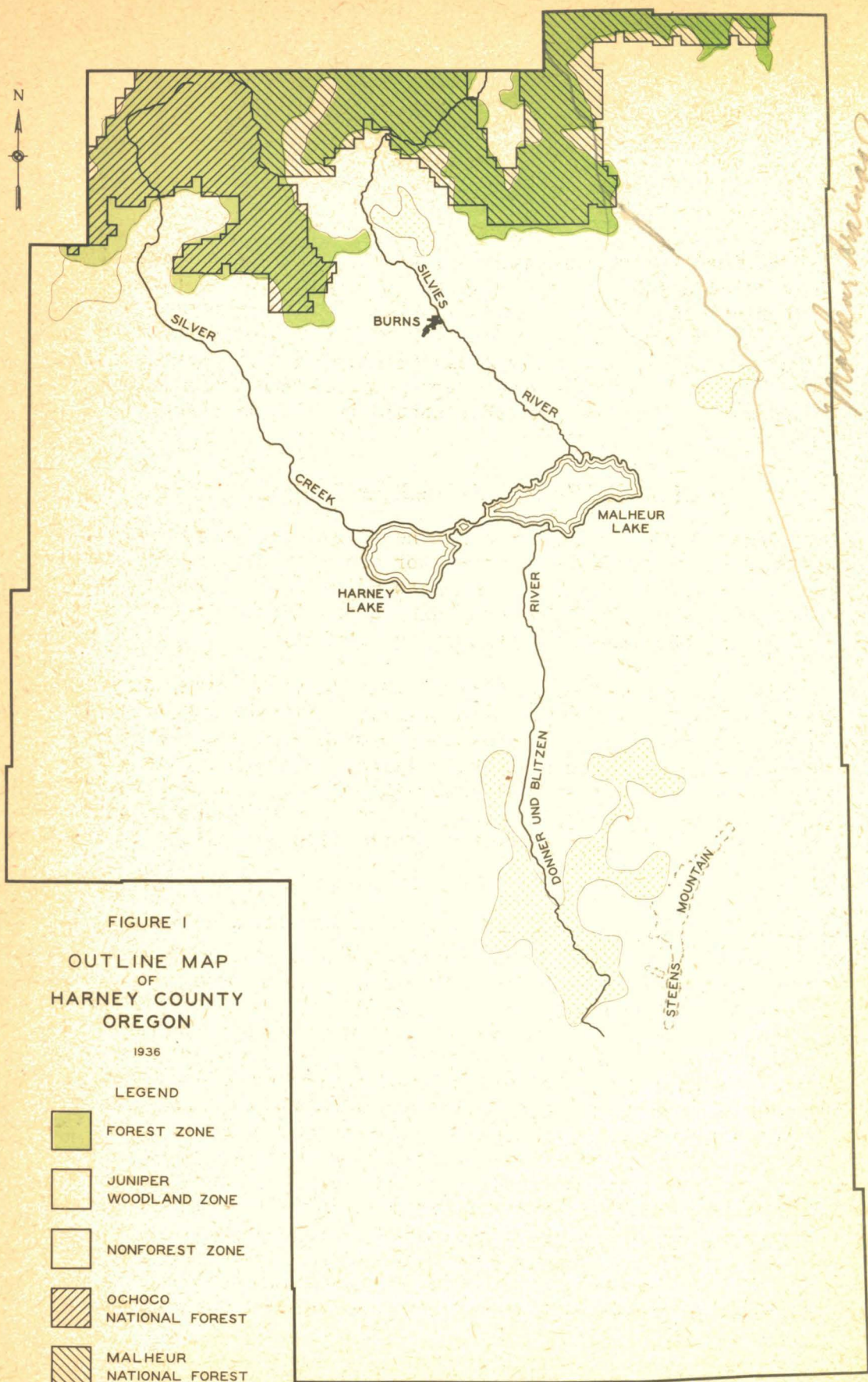
U. S. DEPARTMENT OF AGRICULTURE FOREST SERVICE
PACIFIC NORTHWEST FOREST EXPERIMENT STATION
THORNTON T. MUNGER, DIRECTOR

H. J. ANDREWS, IN CHARGE OF FOREST SURVEY R. W. COWLIN, ASSISTANT
F. L. MORAVETS, IN CHARGE OF FIELD AND OFFICE WORK
IN HARNEY COUNTY

PORTLAND, OREGON

MAY 7, 1936

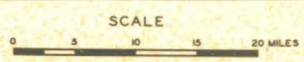
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Malheur drainage

FIGURE 1
 OUTLINE MAP
 OF
 HARNEY COUNTY
 OREGON
 1936

- LEGEND
- FOREST ZONE
 - JUNIPER WOODLAND ZONE
 - NONFOREST ZONE
 - OCHOCO NATIONAL FOREST
 - MALHEUR NATIONAL FOREST



FOREST STATISTICS OF HARNEY COUNTY, OREGON

By F. L. Moravets^{1/}

The forests of Harney County, Oregon, were inventoried by the Forest Service during the latter half of 1935 as a part of a national survey of forest resources. Results of this inventory, summarized in four tables and shown graphically in four figures, are included in this report. The methods of the survey, and detailed definitions of forest types, are contained in "The Forest Survey of Eastern Oregon and Eastern Washington", an explanatory text that should be read in connection with the report.

Location and Description of County

Harney County lies in the southeastern portion of Oregon, extending northward from the Nevada line for a distance of approximately 160 miles, and varying in width from 60 to 85 miles. It has a total land area of approximately 6,357,120 acres and is the largest county in the State, and one of the largest in the United States.

The county occupies part of a great plateau which, as a whole, is nearly level or only slightly undulating. The central portion is comprised of great stretches of tableland broken in places by scarps bordering broad, level, alluvial plains lying, as a rule, only a few hundred feet lower than the tablelands. The elevation of the valley floors usually ranges from 4,000 to 4,200 feet and that of the tablelands from 4,500 to 5,000 feet. The largest of the alluvial plains is known as

^{1/} THE FIELD AND OFFICE WORK OF THE FOREST SURVEY OF HARNEY COUNTY WAS DONE BY F. L. MORAVETS, PAUL D. KEMP, P. N. PRATT, H. M. WOLFE, M. J. LAURIDSEN, GEO. N. ALLMAN, A. W. HODGMAN, AND W. E. SANKELA.

^{2/} OREGON AND WASHINGTON WERE DIVIDED FOR PURPOSES OF THE SURVEY INTO TWO REGIONS, (1) THE DOUGLAS FIR REGION, CONSISTING OF THAT PART OF BOTH STATES WEST OF THE SUMMIT OF THE CASCADE RANGE, AND (2) EASTERN OREGON AND EASTERN WASHINGTON, THAT PART OF BOTH STATES EAST OF THE SUMMIT OF THE CASCADE RANGE. EACH REGION WAS DIVIDED INTO FOREST SURVEY UNITS COMPOSED OF ONE OR MORE COUNTIES. AT A LATER DATE A REPORT WILL BE ISSUED FOR EACH SURVEY UNIT PRESENTING A TEXTUAL DESCRIPTION OF THE UNIT, DETAILED INVENTORY SUMMARIES, AND STATISTICS OF GROWTH AND DEPLETION ANALYZED IN THE LIGHT OF THE INVENTORY. FINALLY, A REGIONAL REPORT WILL BE ISSUED WHICH WILL SUMMARIZE THE UNIT REPORTS, PRESENTING AND DISCUSSING FINDINGS FOR THE REGION AS A WHOLE. THE REGIONAL REPORT WILL INCLUDE AN INTERPRETATION OF THE FOREST SURVEY DATA AS RELATED TO OTHER ECONOMIC DATA AND A COMPREHENSIVE ANALYSIS OF THE REGIONAL FOREST SITUATION FROM BOTH A PHYSICAL AND AN ECONOMIC STANDPOINT.

Harney Valley and covers an area of about 700 square miles. In the northern part of the county the surfaces lose their plateau-like character and rise in mountainous slopes, broken by stream courses. Elevations here average from 4,500 to 5,500 feet. The southeastern portion, also, is less plateau-like and a long gradual slope rises to an elevation of 9,354 feet, the crest of Steens Mountain. This rugged mass trends northeasterly for a distance of over 40 miles and is the most dominant topographic feature in southeastern Oregon. To the south of this mountain are the Pueblo Mountains and the Trout Creek Mountains, two ranges of lesser height.

In Harney Valley lie two large shallow lakes, Malheur Lake and Harney Lake, into which the greater part of the drainage of Harney County discharges. This large drainage basin extends from the southern end of Steens Mountain northward through the county to the base of the Strawberry Range in Grant County. The Donner and Blitzen River and its tributaries have their source in the Steens Mountain region and are perennial streams, fed by springs in addition to the surface run-off. From the north and originating in the Strawberry Range, the Silvies River carries a considerable volume of water in the spring but little water during the dry summer and fall months. Silver Creek enters Harney Valley from the northwest, having its source in the forested mountainous area. The flow of this stream, likewise, varies greatly throughout the year. In the northeast, and separated from the Harney Basin by low tablelands, rise several intermittent streams that flow into the Middle Fork of the Malheur River, a tributary of the Snake River. In the extreme western and southern portions of the county the run-off collects in small depressions to form shallow lakes that persist for only a short period each year. The dry cycle of the past ten or fifteen years, overgrazing throughout the basin's area, and the diverting of stream flow for irrigation, have caused Malheur Lake and Harney Lake to become practically dry.

The greatest single factor influencing the character of the vegetative growth in Harney County is the supply of moisture. The entire region is extremely dry; the average annual precipitation ranges from only 5 to 15 inches. This factor of aridity divides the county's area into three distinct vegetative zones: the nonforest zone, the juniper woodland zone, and the forest zone (figure 1).

Nonforest Zone

The nonforest zone comprises all but a small part of the county's land area. Of the total of 6,357,120 acres, 5,726,195 acres (90.1 percent) was classified by the survey as nonforest land (table 1). Practically all of the nonforest land consists of the vast stretches of tablelands and valley floors; the remainder is made up of occasional small openings in the forest zone.

Prior to settlement, bunch grass was as widely distributed as sagebrush according to historical accounts. Due to excessive and unregu-

lated grazing by sheep, cattle, and horses, bunch grass has been largely replaced by sagebrush, which is now the dominant plant growth of the zone, occurring everywhere except on cultivated fields, moist meadow lands, marshes, and dry alkaline lake beds.

Juniper Woodland Zone

With an increase in elevation of a few hundred feet, the second zone, juniper woodland, begins. Although western juniper is found scattered throughout the county on the upper slopes of buttes, it occurs in only a few locations in a sufficiently stocked stand and over an extensive enough area to be classified as a zone. The largest of such areas covers roughly 150 square miles and occurs on the western slopes of Steens Mountain. A second but much smaller area of this woodland zone lies in the northwestern portion of the county, just below the forest zone. A third area is found near the Silvies River northwest of Burns, and another extends up the western slope of Crane Creek Mountain. Small areas of juniper type are found intermingled with the forest zone, on the dryer exposures and flats and along its lower boundaries.

Western juniper does not reach saw-timber size in the county. The trees are short and bushy, valuable only for fence posts and fuel wood. Best development is reached by trees found in the forest zone. As is usual with the species, heart rot is very prevalent in the larger trees.

Of the total area of the juniper types over 90 percent is found outside the forest zone, largely in the juniper woodland zone. A small acreage of juniper is found in certain parts of the nonforest zone in patches too small to recognize as a zone. The volume in cords of juniper in the county by ownership class is shown in the lower part of table 1. Seventy percent of the total acreage in the juniper types and practically the same percentage of the cordwood volume occur on the Public Domain.

Forest Zone

Scanty precipitation has limited the forest zone to the mountainous slopes in the extreme northern part of the county. Here the lower edge of the forest or the dry timber line occurs at an elevation of about 4,600 feet. The slopes of Steens Mountain, although extending from 5,000 feet to well over 9,000 feet, are unforested, apparently because the aridity is so intense that the dry timber line coincides with the cold timber line, above which only shrubs and alpine plants exist. This mountain is unique in that its only tree growth, other than juniper and mountain mahogany on the slopes and aspen in the creek bottoms, is a group of white fir trees occupying about five acres in Fir Creek Canyon.

The forest zone reaches practically across the northern part of the county, increasing in extent from east to west. It varies in width from 2 to 25 miles and has an area of approximately 700 square miles. Practically all of the zone lies within national forest boundaries, being

about equally divided between the Malheur National Forest on the east and the Ochoco National Forest on the west. Their southern boundaries follow very closely the lower limits of forest growth. However, within the national forests there is a considerable acreage of alienated land, principally in private ownership.

Forest Types

The area of forest cover types totals 630,925 acres (table 2) or 9.9 percent of the county's area. Of this about 450,000 acres (71 percent) is in the forest zone; the remainder, outside the zone, is practically all in juniper types, there being only a small acreage of aspen on Steens Mountain. The zone is almost entirely occupied by a ponderosa pine forest, over 97 percent of its area being covered by stands in which this species occurs either pure or as the most important component.^{3/}

Ponderosa pine stands of saw-timber size occupy an area of 400,000 acres (table 3) and all but a relatively few of them are composed entirely of pine. Mixed stands in which either white fir or Douglas fir, or both, are associated with the pine are found only on the more moist sites on upper slopes, on northern exposures, and in stream bottoms. Towards the lower limits of the forest zone, and on the dryer exposures, juniper is an associate, and occasionally dense patches of mountain mahogany occur underneath the pine.

Except in the pine woodland type which fringes the desert, the saw-timber stands throughout the zone are of relatively uniform density, having a merchantable volume of from 6 to 15 M board feet per acre. The average for the county of the pine saw-timber types, other than the pine woodland type, is 9 M board feet per acre. Severe losses caused by the western pine beetle (Dendroctonus brevicomis) in recent years have materially reduced many of the stands, particularly in the western portion of the county.

The mixed stands usually have a volume per acre of about 8 M board feet of pine and 4 or 5 M board feet of either white fir or Douglas fir, or both. Immature ponderosa pine stands of saw-timber size occupy a comparatively small acreage and occur in areas of limited extent. Approximately 60 percent of the total acreage in this type is in stands on old burns. They are generally even-aged and average from 8 to 10 M board feet per acre. The remaining acreage is in selectively-logged areas on

3/ THE LOCATION AND EXTENT OF THE FOREST TYPES ARE SHOWN TO BEST ADVANTAGE BY THE ONE-INCH-TO-THE-MILE FOREST SURVEY TYPE MAP OF THE COUNTY. FULL INFORMATION REGARDING THE COUNTY TYPE MAPS AND THE LITHOGRAPHED STATE TYPE MAPS AND HOW THEY MAY BE OBTAINED WILL BE FURNISHED UPON REQUEST.

which the residual stands range from 1 to 3 M board feet per acre. These areas are almost all confined to the region northeast of Burns, as this is the only locality in which any material amount of logging has occurred. Approximately one-half of the acreage of selectively-logged areas is privately owned; the remainder is mostly in national forest ownership.

The pine reproduction types are principally the result of fires or beetle infestations; less than 10 percent of the area in this type is cutover land. In the eastern portions of the zone, reproduction under the mature stands is often quite dense and is sometimes in a stagnated condition.

No nonstocked cutover land was found in the county and the area of deforested burns is insignificant.

Classification of the forest land in the zone that supports species of commercial importance as to site quality or relative productive capacity is shown in table 4.

Ownership of Forest Land

The forest land of the county is very largely in public ownership, only 14 percent of the total area being privately owned. An even smaller portion, 11 percent, of the acreage of saw-timber types is in private ownership. Approximately 58 percent of the forest land and 81 percent of the area of saw-timber types are in national forest ownership. The ownership class "Railroad Selection Pending" includes grant lands within the boundaries of the national forests for which patent is still pending.

Volume of Merchantable Timber

Ponderosa pine furnishes 97 percent of the total volume of 3,073,067 M board feet of merchantable saw timber, and the remainder is practically all white fir and Douglas fir. Western larch is found in only two localities, both near the county's northern boundary. One location is on a northern exposure west of Snow Mountain and the other is in the Malheur River drainage in the northeastern portion of the county.

Ownership of Merchantable Timber

Of the total volume of saw timber in the county, only about 9 percent is in private ownership, 85 percent is in national forest ownership, and the small remainder is in other classes of public ownership.

Insect Damage

In recent years the western pine beetle has caused very serious losses of pine over a large part of the zone and has greatly reduced many of the stands. Losses were heaviest in the years 1931, 1932, and 1933, and were particularly large in the western part of the forest zone in the

Silver Creek and Emigrant Creek drainages, occurring in some of the finest stands in the county, as well as in the sparse stands along the lower limits of forest growth. In parts of these drainages the kill during the season of 1932 was 100 percent on areas of one to ten acres in extent and losses of 50 percent of the stand were not uncommon over quite extensive areas. The loss, as a whole, throughout this locality was around 12 to 15 percent for the three years. In the Silvies River and Malheur River drainages the losses were not nearly as great.

Fortunately this severe beetle epidemic was very materially checked by the extremely low temperatures during the winter of 1932-1933 and losses during the past two years have been normal.

Economic Development

Ever since the white men first settled Harney County, it has been preeminently a stock-raising country, for the vast tableland and valley ranges were valuable chiefly for the grazing of cattle, sheep, and horses. Abundant forage, principally of bunch grass, was to be had throughout the region and meadow lands in the valleys produced wild hay for winter feeding. Extensive ranches were the rule and some of the original holdings were of several hundred thousand acres in extent. Settlements were confined to the better watered areas along the stream courses and were widely scattered.

In the last 15 or 20 years, irrigation of some of the valley lands has made possible the growing of grain and specialized crops. According to the report of the Bureau of the Census for 1930, there was a total area of 795,205 acres in farms, of which 224,174 acres was in grain, specialty crops, or general farms, and the remainder in stock ranches. The leading grain crops were oats, barley, rye, and wheat in that order. A considerable tonnage of hay is produced, most of which is wild hay. Dairying has become quite an industry in the vicinity of Burns but sheep and cattle raising is still the leading agricultural industry.

There was very little industrial development in the county prior to 1925 as there was a lack of transportation facilities. In that year, however, a spur of the Union Pacific railroad was completed from Ontario to Burns, giving the region a rail outlet. Then the opening up of a large body of national forest timber in Bear Valley in Grant County to the north, through a timber sale, resulted in the building of a large sawmill in Burns and the Burns, Harney County, and Malheur Railroad, a common carrier, extending 50 miles north from Burns to Seneca to tap the Bear Valley timber. The mill, a modern plant of all-steel construction and electrically operated, was completed in 1929 by the Edward Hines Lumber Company and has been in operation since that date. It has an eight-hour capacity of 178 M board feet. To date, logging operations of the company have been confined to the vicinity of Seneca in Grant County just north of the Harney County line, logging having been started there in privately owned timber. Recently the company has obtained a

small amount of logs from truck logging operations northwest of Burns in Harney County. There are two other active sawmills in the county, both of which are small, each having an eight-hour capacity of only 8 M board feet. One is located in Burns and the other in Drewsey.

A considerable portion of the timber in Harney County was made available to market by the construction of the railroad from Burns to Seneca. Also, practically all of the timber in the county is readily accessible to Burns and, in conjunction with the timber in Grant County that lies in the same watershed, forms a natural sustained yield unit. Under forest management, there is sufficient timber in the unit to keep the present large mill in Burns operating ad infinitum.

In addition to the rail facilities, highway construction has given Burns and the northern half of the county several connections with other parts of the State. The Central Oregon Highway from Bend to Burns connects with The Dalles-California Highway; another good road north from Burns connects with the John Day Highway; and the Yellowstone Cutoff provides an outlet to the south and east.

The rail outlet, the building of the large lumber plant, and development of highways, caused a rapid development of Burns, the county seat and only town of any size. According to the Bureau of Census, the town had a population of 1,022 in 1920, but in 1930 this had risen to 2,599, an increase of 154 percent. The population of the county increased from 3,992 in 1920 to 5,920 in 1930. However, the county is still the most sparsely inhabited of any in Oregon, having slightly less than 0.6 of a person per square mile, a figure just under that for Lake County.

The wild life resources of the county are quite abundant and in recent years the region has become increasingly popular with sportsmen from outside the county. Mule deer are plentiful in the forested area and on Steens Mountain. Formerly the Malheur and Harney Lakes area was excellent for duck and goose hunting. The Federal Government has set aside these lakes and much of the Blitzen Valley as a migratory bird refuge and the Biological Survey is now actively engaged in reclaiming the area as a nesting ground for wildfowl. The southern portion of the county is part of the range of one of the largest antelope herds remaining in the United States. In 1935, the Hart Mountain Refuge was set aside for antelope, sage hens and other game. This refuge includes a portion of southwestern Harney County.

FOREST STATISTICS FOR HARNEY COUNTY, OREGON
FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 1. VOLUME OF TIMBER BY SPECIES AND BY OWNERSHIP CLASS
DATA CORRECTED TO JANUARY 1, 1936

TREES 12" AND MORE IN D.B.H.
THOUSANDS OF BOARD FEET, LOG SCALE, SCRIBNER RULE

					FEDERAL			
SUR- VEY SYM- BOL :	SPECIES ^{1/}	PRIVATE	STATE, AVAILABLE FOR CUTTING	COUNTY	PUBLIC DOMAIN	RAILROAD SELECTION	NATIONAL FOREST, AVAILABLE FOR CUTTING	TOTAL
Y :	PONDEROSA PINE	282,841	6,712	12,925	64,225	94,270	2,540,027	3,001,000
DF :	DOUGLAS FIR	3,696	74		860		26,505	31,135
WF :	WHITE FIR	1,751		560	40	7	37,956	40,314
WL :	WESTERN LARCH						618	618
TOTAL		288,288	6,786	13,485	65,125	94,277	2,605,106	3,073,067

VOLUME OF CORDWOOD SPECIES
TREES 4" OR MORE IN DIAMETER 1' ABOVE GROUND
CORDS

WJ :	WESTERN JUNIPER	35,281	8,110	310	132,093	155	16,282	192,231
ASP :	ASPEN	5,705		150	5,670		790	12,315
MM :	MOUNTAIN MAHOGANY	922	75	25	1,897		5,777	8,696
	TOTAL	41,908	8,185	485	139,660	155	22,849	213,242

^{1/} IN ADDITION TO THE SPECIES LISTED LODGEPOLE PINE AND NORTHERN BLACK COTTONWOOD ARE KNOWN TO OCCUR IN THE COUNTY, BUT IN NEGLIGIBLE QUANTITIES.

FOREST STATISTICS FOR HARNEY COUNTY, OREGON
FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 2. AREA, IN ACRES, OF ALL FOREST COVER TYPES, BY OWNERSHIP CLASS
DATA CORRECTED TO JANUARY 1, 1936

SUR- VEY TYPE NO.	TYPE DEFINITION	PRIVATE	STATE, AVAILABLE FOR CUTTING	COUNTY	INDIAN, TRIBAL AND TRUST ALLOTMENTS	FEDERAL			TOTAL
						PUBLIC	RAILROAD	NATIONAL	
						DOMAIN	SELECTION	FOREST,	
						PENDING	FOR CUTTING	AVAILABLE	
	WOODLAND:								
5A	DENSE JUNIPER: JUNIPER OR MOUNTAIN MAHOGANY FORESTS OCCUPYING 10% OR MORE OF THE LAND AREA	880	110			2,335		1,170	4,495
5B	SCATTERED JUNIPER: JUNIPER OR MOUNTAIN MAHOGANY FORESTS OCCUPYING 5 TO 10% OF THE LAND AREA	32,685	7,725	295	120	127,840	155	12,635	181,455
5C	PONDEROSA PINE WOODLAND: SCATTERED STANDS OF MATURE PONDEROSA PINE ON UNFAVORABLE SITES	8,285	840	75		9,880	120	32,085	51,285
	PONDEROSA PINE: FORESTS CONTAINING 50% OR MORE OF PONDEROSA PINE								
20	PONDEROSA PINE, LARGE: FORESTS CONTAINING 50 TO 80% OF PONDEROSA PINE, MORE THAN 22" DBH	400	15			85		8,800	9,300
20.5	PURE PONDEROSA PINE, LARGE: FORESTS CONTAINING 80% OR MORE OF PONDEROSA PINE, MORE THAN 22" DBH	30,585	985	1,310		7,220	6,920	267,675	314,695
21	PONDEROSA PINE, SMALL: 12 TO 22" DBH	6,515		500		1,930	1,085	14,975	25,005
22	PONDEROSA PINE SEEDLINGS, SAPLINGS, AND POLES: LESS THAN 12" DBH	5,180	350	175		4,320	185	24,965	35,175
	PINE MIXTURE: MIXED FORESTS CONTAINING 20 TO 50% OF PONDEROSA PINE								
27	PINE MIXTURE, LARGE: 12" OR MORE DBH							425	425
28	PINE MIXTURE, SMALL: LESS THAN 12" DBH							420	420
	WHITE FIR: FORESTS CONTAINING 50% OR MORE OF WHITE FIR								
29	WHITE FIR, LARGE: 12" OR MORE DBH							105	105
	LODGEPOLE PINE: FORESTS CONTAINING 50% OR MORE OF LODGEPOLE PINE								
26	LODGEPOLE PINE, MEDIUM: 6 TO 10" DBH							140	140
	HARDWOOD: FORESTS CONTAINING 50% OR MORE OF ASPEN								
31	HARDWOOD, SMALL: LESS THAN 12" DBH	2,615		30		2,675		50	5,370
	DEFORESTED AREAS: NONRESTOCKED AREAS DEFORESTED OTHERWISE THAN BY CUTTING								
37	DEFORESTED BURNS	30				535		1,315	1,880
38	NONCOMMERCIAL ROCKY AREAS	55	15			300		805	1,175
	TOTALS FOR FOREST LAND	87,230	10,040	2,385	120	157,120	8,465	365,565	630,925
	I & 2: NONFOREST LAND: CULTIVATED, GRASS, SAGEBRUSH, BARRENS, CITIES, UNMEANDERED WATER SURFACES, ETC.								
			5,621,285 ACRES OF NONFOREST LAND UNCLASSIFIED BY OWNERSHIP				1,130	103,780	5,726,195
	TOTALS FOR COUNTY						9,595	469,345	6,357,120

1/ THE TOTAL AREA OF THE COUNTY, ACCORDING TO THE BUREAU OF THE CENSUS, IS 6,357,120 ACRES. OF THIS TOTAL, 735,835 ACRES WAS CLASSIFIED AS TO OWNERSHIP BY THE FOREST SURVEY.

FOREST STATISTICS FOR HARNEY COUNTY, OREGON
FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 3. AREA, IN ACRES, OF GENERALIZED FOREST TYPES, BY OWNERSHIP CLASS
DATA CORRECTED TO JANUARY 1, 1936

TYPE DEFINITION	FEDERAL							
	PRIVATE	STATE, AVAILABLE FOR CUTTING	COUNTY	INDIAN, TRIBAL AND TRUST ALLOTMENTS	PUBLIC DOMAIN	RAILROAD SELECTION PENDING	NATIONAL FOREST, AVAILABLE FOR CUTTING	TOTAL
WOODLAND: JUNIPER								
SURVEY TYPES 5A AND 5B	33,565	7,835	295	120	130,175	155	13,805	185,950
HARDWOOD: ASPEN								
SURVEY TYPE 31	2,615		30		2,675		50	5,370
PONDEROSA PINE 12" OR MORE DBH								
SURVEY TYPES 5 ¹ , 20, 20.5, 21, AND 27	45,785	1,840	1,885		19,115	8,125	323,960	400,710
PONDEROSA PINE LESS THAN 12" DBH								
ON CUTOVER AREAS	1,430	5	80		730		1,110	3,355
ON OLD BURNS	3,750	345	95		3,590	185	24,275	32,240
SURVEY TYPES 22 AND 28								
TOTAL	5,180	350	175		4,320	185	25,385	35,595
CONIFERS 12" OR MORE DBH OTHER THAN PONDEROSA PINE								
AND LODGEPOLE PINE								
SURVEY TYPE 29							105	105
LODGEPOLE PINE LESS THAN 12" DBH								
SURVEY TYPE 26							140	140
NONCOMMERCIAL AREAS								
SURVEY TYPE 38	55	15			300		805	1,175
DEFORESTED BURNS								
SURVEY TYPE 37	30				535		1,315	1,880
TOTALS FOR FOREST LAND	87,230	10,040	2,385	120	157,120	8,465	365,565	630,925
NONFOREST LAND								
SURVEY TYPES 1 AND 2	5,621,285	ACRES OF NONFOREST LAND UNCLASSIFIED BY OWNERSHIP				1,130	103,780	5,726,195
TOTALS FOR COUNTY						9,595	469,345	1/6,357,120

1/ THE TOTAL AREA OF THE COUNTY, ACCORDING TO THE BUREAU OF THE CENSUS, IS 6,357,120 ACRES. OF THIS TOTAL, 735,835 ACRES WAS CLASSIFIED AS TO OWNERSHIP BY THE FOREST SURVEY.

FOREST STATISTICS FOR HARNEY COUNTY, OREGON
FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 4. AREA OF FOREST LAND, BY SITE QUALITY
DATA CORRECTED TO JANUARY 1, 1936

TYPE	SITE QUALITY CLASS ^{1/}	ACRES	AREA			
			PERCENTAGE OF --			
			CONIFEROUS :	FOREST LAND :	TOTAL :	TOTAL :
			CLASSIFIED :	AS TO SITE :	LAND ^{2/} :	AREA OF :
			QUALITY :			COUNTY
PONDEROSA PINE, PONDEROSA PINE MIXTURE, AND WHITE FIR	PONDEROSA PINE	III :	2,500 :	.6 :	.4 :	
		IV :	309,170 :	70.5 :	49.0 :	4.9
		V :	115,790 :	26.4 :	18.4 :	1.8
		VI :	10,830 :	2.5 :	1.7 :	0.2
TOTAL			438,290 :	100.0 :	69.5 :	6.9
JUNIPER			185,950 :		29.5 :	2.9
LODGEPOLE PINE			140 :			
NONCOMMERCIAL ROCKY AREAS			1,175 :		.2 :	0.1
HARDWOOD			5,370 :		.8 :	
TOTAL			192,635 :		30.5 :	3.0
GRAND TOTAL			630,925 :		100.0 :	9.9

- ^{1/} THE "SITE QUALITY" OF A FOREST AREA IS ITS RELATIVE PRODUCTIVE CAPACITY, DETERMINED BY CLIMATIC, SOIL, TOPOGRAPHIC, AND OTHER FACTORS. THE INDEX OF SITE QUALITY IS THE AVERAGE HEIGHT OF THE DOMINANT STAND AT THE AGE OF 100 YEARS. SIX SITE QUALITY CLASSES ARE RECOGNIZED FOR PONDEROSA PINE AND FIVE FOR DOUGLAS FIR, CLASS I BEING IN EACH CASE THE HIGHEST. IN THE SURVEY THE PONDEROSA PINE AND DOUGLAS FIR CLASSIFICATIONS, RESPECTIVELY, WERE USED NOT ONLY FOR TYPES OF WHICH THESE SPECIES ARE CHARACTERISTIC COMPONENTS BUT FOR OTHER TYPES FOR WHICH NO SITE QUALITY CLASSIFICATIONS HAVE BEEN DEVELOPED.
- ^{2/} THE COUNTY HAS A TOTAL AREA OF 6,357,120 ACRES (ACCORDING TO THE REPORT OF THE BUREAU OF THE CENSUS FOR 1930), OF WHICH 630,925 ACRES (9.9 PERCENT) IS FOREST LAND AND 5,726,195 ACRES (90.1 PERCENT) IS NONFOREST LAND.

FOREST STATISTICS FOR HARNEY COUNTY, OREGON

FROM INVENTORY PHASE OF FOREST SURVEY

FIGURE 2. DISTRIBUTION OF SAW-TIMBER VOLUME BY SPECIES AND OWNERSHIP CLASS (FROM TABLE 1)

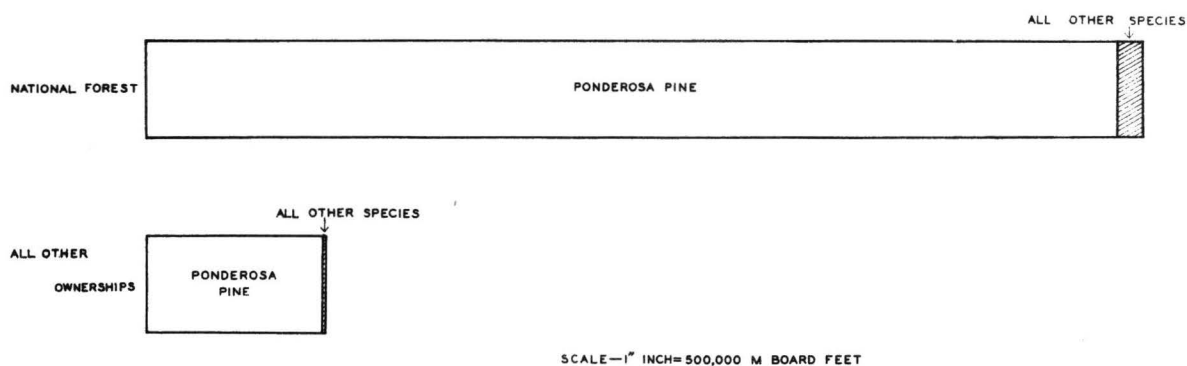


FIGURE 3. OWNERSHIP OF FOREST LAND (FROM TABLE 2)

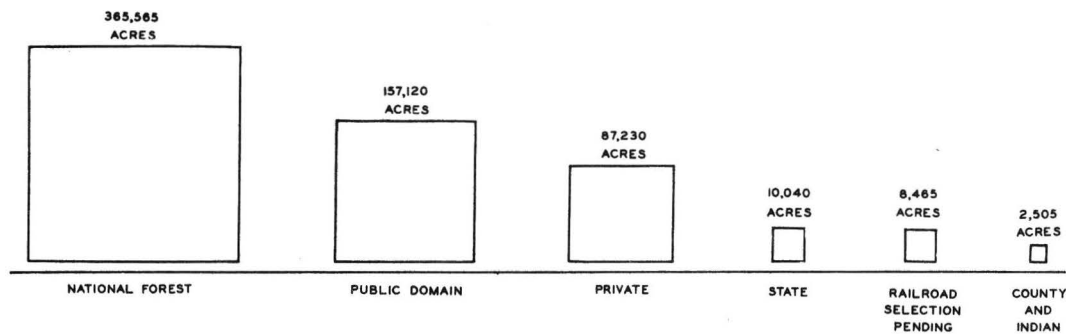


FIGURE 4. DISTRIBUTION OF FOREST LAND BY GENERALIZED TYPES, ALL OWNERSHIP CLASSES (FROM TABLE 3)

